

Amendments to the Specification

- 1) Please insert the following subtitle at page 1, below the title:

Background

- 2) Please delete the subtitle at page 1, line 3.

- 3) Please delete the subtitle at page 1, line 13.

- 4) Please delete the subtitle at page 2, line 6.

- 5) Please delete the subtitle at page 2, line 31.

- 6) Please insert the following subtitle and text at page 3, line 1:

Summary

An apparatus and method that generates and supplies fluorine gas to a semiconductor processing system is disclosed. The apparatus is provided with

- an electrolytic cell that generates fluorine gas by the electrolysis of hydrogen fluoride in an electrolytic bath comprising hydrogen fluoride-containing molten salt,
- a storage means for a substitute gas selected from the group consisting of nitrogen fluoride, sulfur fluoride, and chlorine fluoride,
- a gas switching section that is connected to the electrolytic cell and cylinder and that selectively supplies a gas utilization section with fluorine gas from the electrolytic cell or substitute gas from the cylinder,
- a detector, and
- a controller that, upon detection of an abnormal state of the fluorine gas operation system, exercises control on the gas switching section so as to feed the substitute gas from the cylinder to the semiconductor processing system.

- 7) Please insert the following subtitle and text at page 3, after the above-inserted subtitle and text:

Brief Description of the Drawings

For a further understanding of the nature and objects for the present invention, reference should be made to the following detailed description, taken in conjunction with the accompanying drawings, in which like elements are given the same or analogous reference numbers and wherein:

- Figure 1 illustrates a semiconductor processing system that incorporates an apparatus for the generation and supply of fluorine gas;
- Figure 2 illustrates an exemplary modification of the semiconductor processing apparatus that is used in combination with the gas supply system shown in Figure 1;
- Figure 3 illustrates an apparatus for the generation and supply of fluorine gas; and
- Figure 4 illustrates a second apparatus for the generation and supply of fluorine gas.

- 8) Please insert the subtitle at page 3, line 15, after the above-inserted subtitle and text:

Description of Preferred Embodiments

- 9) Please delete the subtitle at page 5, line 15.

- 10) Please delete the subtitle at page 11, line 26.

- 11) Please delete page 12 in its entirety.

- 12) Please insert the following paragraph at new page 12, line 1:

It will be understood that many additional changes in the details, materials, steps and arrangement of parts, which have been herein described in order to explain the nature of the invention, may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims. Thus, the present invention is not intended to be limited to the specific embodiments in the examples given above.

- 13) Please replace the subtitle at page 13, line 1, with the following text:

~~Claims~~ What is claimed is:

- 14) Please delete the 16th page in its entirety.

- 15) Please insert the following subtitle and text to new page 16, line 1:

Abstract of the Disclosure

An apparatus and method of fluorine gas generation and supply for the gas supply system of a semiconductor processing system, which includes a

backup system that is both safe and inexpensive. The apparatus contains an electrolytic cell that generates fluorine gas and a cylinder that holds a backup supply gas (selected from the group consisting of nitrogen fluoride, sulfur fluoride, and chlorine fluoride). The electrolytic cell and cylinder are connected to a controller that selectively supplies the semiconductor processing system with fluorine gas from the electrolytic cell or with backup supply gas from the cylinder. Upon detection of an abnormal state at the electrolytic cell by a detector, the backup supply gas is supplied from the cylinder.